



FEMA

Mitigation of Essential Structures Helps to Keep Waste Water Treatment Plant Ope

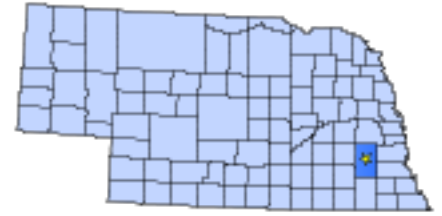
Lincoln, NE - In January 2000, the Nebraska Emergency Management Agency (NEMA) approved Hazard Mitigation Grant Program (HMGP) funds for the City of Lincoln's Waste Water Treatment Plant (WWTP), Theresa Street location. The WWTP had requested funds to provide flood protection around an electrical substation and transformers that would be in danger of failing during a potential flood event.

The electrical substation was originally enclosed by a chain-link fence that was open to potential floodwaters from Salt Creek. The HMGP grant helped to pay for the construction of a six foot brick and reinforced concrete wall to enclose the electrical substation. The entrance was engineered for stop logs (removable flood shields) to be inserted during the time of a flood warning, completing the barrier and protecting the substation from floodwaters. The gates are tested on an annual basis to ensure proper fit.

On the west side of the WWTP an electrical transformer was mitigated by raising it three feet over the 100-year flood elevation. The transformer was set up on top of a brick and cement foundation structure effectively raising and protecting it.

The plant's sludge-processing tanks' below-grade stairwells were susceptible to flooding. The stairwell was mitigated by being partially elevated with concrete and enclosed with approximately 12 inches of stainless steel. The stairwell entrance has also been designed using a similar technique used on the electrical substation, incorporating stop logs to prevent floodwaters from filling the stairwells.

The project had a total cost of approximately \$298,000.00 of which \$178,000.00 was awarded through the HMGP grant. The benefits of the project greatly outweigh the initial cost. These protective measures help to protect vital components of the WWTP from the Salt Creek that runs along the side of the plant.



Lancaster County,
Nebraska



Quick Facts

Sector:

Public/Private Partnership

Cost:

\$298,000.00 (Estimated)

Primary Activity/Project:

Flood-proofing

Primary Funding:

Hazard Mitigation Grant Program (HMGP)